The influence of experimental groin pain on abdominal muscle recruitment

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Goal 1: By evoking experimental pain we would like to investigate whether abdominal muscle recruitment changes under conditions of experimental pain. Goal 2: By threating with experimental groin pain we would like to investigate how any alterations...

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Tendon, ligament and cartilage disorders
Study type	Observational non invasive

Summary

ID

NL-OMON31813

Source
ToetsingOnline

Brief title
Effects of experimental groin pain

Condition

- Tendon, ligament and cartilage disorders

Synonym
groin pain

Research involving
Human

Sponsors and support

Primary sponsor: Universitair Medisch Centrum Utrecht
Source(s) of monetary or material Support: ZonMw Den Haag

Intervention

Keyword: abdominals, groin, pain

Outcome measures

Primary outcome

Changes in thickness values of internal and external oblique and transversus

abdominus during the second and third task.

Secondary outcome

not applicable

Study description

Background summary

Recent research has shown that longstanding adduction related groin pain has several similarities with women suffering poost partum pelvic pain (Mens et al. (2006). Tightening a pelvic belt increases adduction strenght en decreases pain in about 70% of the athletes with adduction related groin pain. Richardson et al (2002) heve shown that m. transversus abdominus is a important muscle for pelvic stability, and anatomically represents a internal pelvic belt. Later research by Cowan et al. (2004) has shown that m. transversus abdominus has a dysfunction in athletes with longstanding groin pain. Since this study was crossectional, it is not known whether the dysfunction is a results of, or caused by the groin pain.
By experimentally evoking adduction related groin pain in healthy subjects we can get more insight in this matter. Second, by evaluating the effects of threat of groin pain, we can get insight in how any alterations in motor control are organized by the central nervous system.
Hypothesis 1: Experimental groin pain leads tot changes in motor control of the abdominal muscles.
Hypothesis 2: Threat of experimental groin pain leads to changes in motor control of the abdominal muscles.

Study objective

Goal 1: By evoking experimental pain we would like to investigate whether abdominal muscle recruitment changes under conditions of experimental pain.

Goal 2: By threating with experimental groin pain we would like to investigate how any alterations in motor control are organized.

Study design

The study is organized according to an experimental design, evaluating the "within subject" effects of experimental (threat of) groin pain. Recruitment of abdominal muscles is evaluated

Three tasks (rest, hip adduction, Active Straight Leg Raise) are asked during three conditions (no groin pain, groin pain and threat of groin pain)

All echographic measures are taken in supine lying. Task 2 & 3 are regularly applied in sports medicine to provoke groin pain in athletes (Cowan et al., 2004; Mens et al., 2006).

Five repetitions are made per task per condition. Bad quality of echographic pictures will lead to an extra repetition. Order of tasks is standardized. We start with condition 1 (no groin pain). condition two and three are variated ad random.

All measurements are performed by a single person, to prevent inter-observer variation. All images are digitally stored and judges by an observer blinded for task and condition.

For more details I refer to the research protocol chapter 6.

Study burden and risks

The extent of the burden associated with participation are considered reasonable. During the first condition, load for the participant is minimal. During the second and third condition, load is reasonable. By evoking pain using electrostimulation, pain can be switched on and off, so the subject will not experience pain when nothing happens.

There are no risks for the subjects in participation

Contacts

Public
Universitair Medisch Centrum Utrecht

Heidelberglaan 100
3508 GA Utrecht

Nederland
Scientific
Universitair Medisch Centrum Utrecht

Heidelberglaan 100
3508 GA Utrecht
Nederland

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

male and female athletes
18-45 years old

Exclusion criteria

Injuries to the muskuloskeletal system; anatomical abnormalities; obvious psycho-pathology or unable to fill in forms; systemic diseases. Women are also excluded if they are pregnant or have a history of pregnancy

Study design

Design

Study type: Observational non invasive
Masking: Open (masking not used)

Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	01-06-2007
Enrollment:	12
Type:	Actual

Ethics review

Approved WMO

Date:	13-05-2008
Application type:	First submission
Review commission:	METC Universitair Medisch Centrum Utrecht (Utrecht)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL20303.041.07